

FIG. 1

FIG. 2 is a block diagram of a system 200. The system 200 includes a CPU 215, a communication port 210, an I/O interface 220, a clock 225, an OS 230, logic and control 235, ROM 240, RAM 245, and a database 260. The database 260 includes a universal account database 265, a merchant database 270, an option supplier database 275, an option structure database 280, and a transaction database 285. The system 200 is connected to payment and data networks.

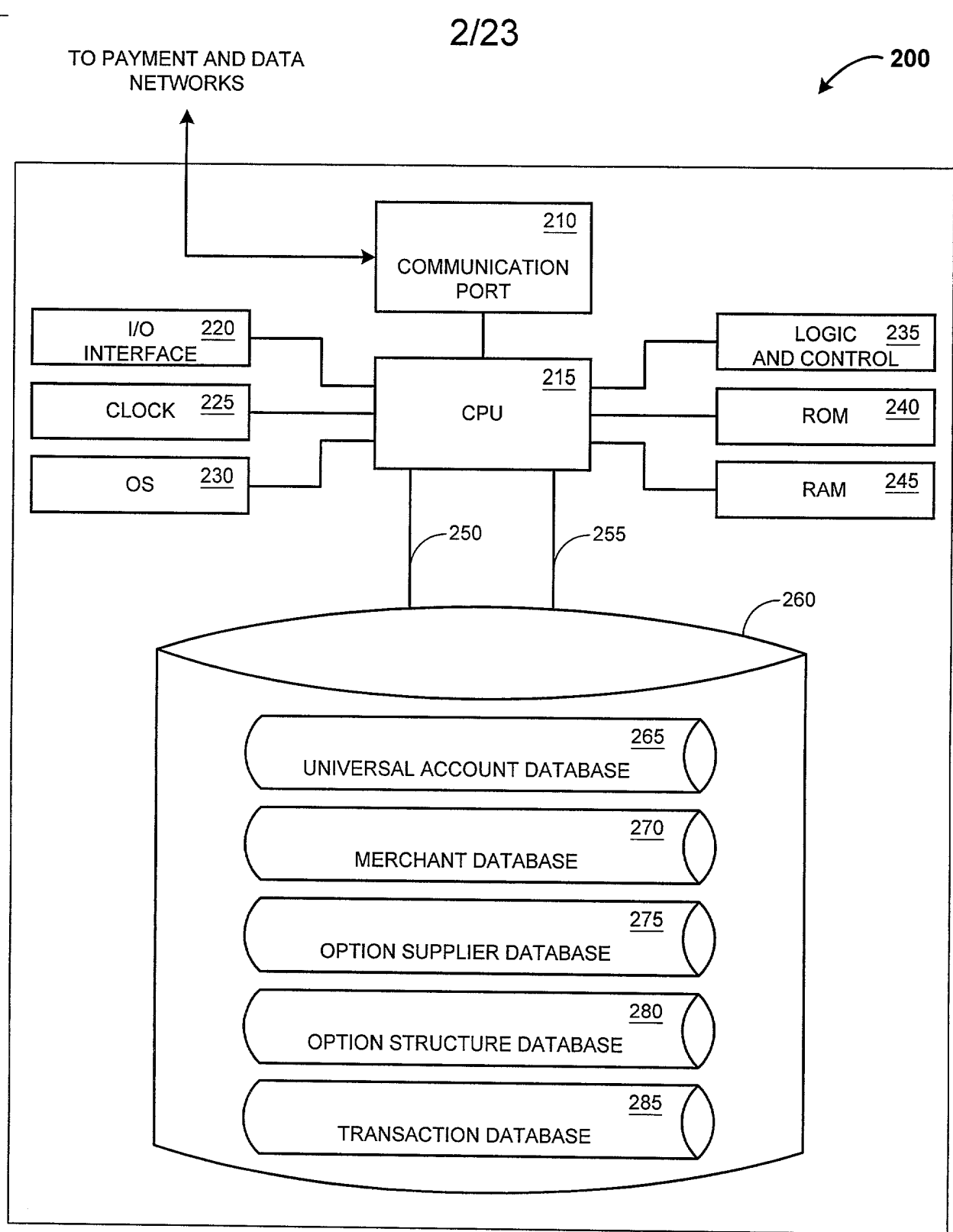


FIG. 2

3/23

300

UNIVERSAL ACCOUNT NUMBER	OWNER NAME	OWNER ADDRESS	OWNER TELEPHONE	DEVICE ACCESS	PREFERENCES
1313-3333-4444-5555	GREGORY FXI	3 LAKEVIEW AVENUE CONCORD, MA 01771	781-555-3456	781-555-2233	LOWEST RATE
1313-4444-5555-6666	LINDA JEAN	5 OCEAN DRIVE STOW, MA 01775	978-555-5678	617-555-4578#9804	CASH BACK
1313-5555-6666-7777	PAUL JAMES	7 TELECOM WAY GROTON, MA 01650	978-555-7890	010.136.067.256	SYSTEM DEFAULTS

RC1

RC2

RC3

FIG. 3

4/23

400

410 PDI PLANET - OWNER DISPLAY 415

420 ACCOUNT NUMBER: 1313-3333-4444-5555 PREFERENCES: SORTED BY RANK:

NAME: GREGORY FXI ☒ LOWEST INTEREST RATE 1

ADDRESS: 3 LAKEVIEW AVENUE ☒ IMMEDIATE CASH DISCOUNT 2

CONCORD, MA 01771 ☒ CHARITABLE DONATIONS 3

TELEPHONE NO.: 781-555-3456 ☒ DELAYED CASH BACK 4

DEVICE ACCESS: 781-555-2233 ☒ DELTA AIRLINE MILES 5

☐ DELAYED INTEREST RATE

☒ AUTO-ENROLLMENT FOR OPT-IN ☐ MYPOINTS REWARD POINTS

435 PAYMENT AND COLLECTION/REDEMPTION ACCOUNTS:

440 ISSUER NAME: TYPE: (BUSI/PERS) ACCOUNT NUMBER: STATUS:

AMERICAN EXPRESS ☐ AMEX GOLD 1111-2222-3333-444 ACTIVE

DELTA AIRLINE MILES ☐ FREQUENT FLIER 7777-99-2222 ACTIVE

GENEVA BANK ☐ MASTERCARD ONE 1221-1221-1221-1221 ACTIVE

LONDON BANK LTD. ☐ VISA PLATINUM PROVISIONAL PRE-APPVD

MACY'S ☐ CREDIT CARD 82-828282-82 ACTIVE

MERRILL LYNCH ☐ INVESTMENT 345-34534-53 ACTIVE

SHAW'S MARKET ☐ LOYALTY CARD 9832-983-298 ACTIVE

WISCONSIN INS CO ☐ INSURANCE POLICY 3-3983-398339 ACTIVE

445 RULES AND CONDITIONS:

450 ACQUIRE NO MORE THAN 25,000 DELTA AIRLINE MILES THRU 31 DECEMBER 2001.

AUTO-ENROLLMENT MAY ONLY PROVIDE OWNER NAME AND MAILING ADDRESS.

455 EARNED AND AVAILABLE OPTION AWARDS:

460 2 ADMISSION PASSES TO HOYT'S MOVIE THEATERS, EXPIRATION 31 DEC 2005

20% DISCOUNT AT SPAGO'S RESTAURANT, NO EXPIRATION

465 FREE SHIPPING ON ALL JCPENNEY INTERNET ORDERS, EXPIRATION 30 JUNE 2001

\$10.00 UNIVERSAL GIFT ALLOWANCE WHEN PAYING BY VISA, NO EXPIRATION

FIG. 4

MERCHANT ACCOUNT NUMBER	MERCHANT NAME	MERCHANT ADDRESS	MERCHANT TELEPHONE	DEVICE ACCESS	ACCEPTED PAYMENTS
4444-5555	TOP SOFTWARE	101 MAIN STREET CONCORD, MA 01776	781-555-9876	781-555-9998	MC, VISA, DISCOVER
8888-9999	LINENS ETC.	202 COMMERCE WAY ACTON, MA 01818	617-555-3334	617-555-1324#9954	AMEX, MC, MYPPOINTS
5555-7777	PHONES PLUS	303 STORE LANE BOSTON, MA 03838	617-555-7713	010.186.066.256	ALL EXCEPT DINERS

RM1

RM2

RM3

FIG. 5

6/23

600

610 PDI PLANET - MERCHANT DISPLAY 615

620 ACCOUNT NUMBER: 4444-5555 PREFERENCES: SORTED BY RANK: 630 625

NAME: TOP SOFTWARE ☒ VISA 1

ADDRESS: 101 MAIN STREET ☒ MASTERCARD 2

CONCORD, MA 01776 ☒ AMERICAN EXPRESS 3

TELEPHONE NO.: 781-555-9876 ☒ DISCOVER 4

DEVICE ACCESS: 781-555-9998 ☒ MYPPOINTS REWARDS 5

☐ DINERS CLUB

☒ AUTO-ENROLLMENT FOR OPT-IN ☐ LOWEST PROCESSING FEES

635 MERCHANT PROCESSING ACCOUNTS:

640 ISSUER NAME:	TYPE:	ACCOUNT NUMBER:	STATUS:
AMERICAN EXPRESS	MERCHANT 2.5%	2222-3333-444	ACTIVE
DISCOVER FIN'L SRVC	MERCHANT 2.4%	PROVISIONAL	PRE-APPVD
MASTERCARD	MERCHANT 2.0%	3333-6666-7777	ACTIVE
MERRILL LYNCH	MERCHANT	PROVISIONAL	PRE-APPVD
MYPPOINTS REWARDS	MERCHANT	PROVISIONAL	PRE-APPVD
VISA	MERCHANT 1.5%	445445-44	ACTIVE

645 RULES AND CONDITIONS:

650 OFFER NO MORE THAN 2.5 DELTA AIRLINE MILES FOR PURCHASE AMOUNTS UNDER \$5,000.00 THRU 31 DECEMBER 2001 PAID WITH A VISA ACCOUNT.

655 ACTIVE AND AVAILABLE OPTION OFFERS:

660 1 ADMISSION PASS TO HOYT'S MOVIE THEATERS PER PURCHASE ON 14 FEB 2001

20% DISCOUNT ON ALL PURCHASES VALID ONLY ON THE DAY OF 21 JUNE 2001

665 FREE SHIPPING ON ALL INTERNET ORDERS, EXPIRATION 30 JUNE 2001

\$10.00 UNIVERSAL GIFT ALLOWANCE ON PURCHASES OVER \$100.00 WHEN PAID BY VISA, EXPIRATION 15 APRIL 2001

FIG. 6

FIG. 7 is a block diagram of a system 700 for processing a payment transaction. The system 700 includes a payment processor 710, a merchant server 720, a payment gateway 730, and a payment network 740. The payment processor 710 is configured to receive a payment request from the merchant server 720 and to process the payment request. The payment gateway 730 is configured to receive a payment request from the payment network 740 and to forward the payment request to the payment processor 710. The payment network 740 is configured to receive a payment request from the payment processor 710 and to forward the payment request to the payment gateway 730.

7/23

700

OPTION SUPPLIER ACCOUNT NUMBER	SUPPLIER NAME	SUPPLIER ADDRESS	SUPPLIER TELEPHONE	DEVICE ACCESS	OPTION STRUCTURES
987654	VISA	777 PLAZA AVENUE NEW YORK, NY 10010	203-555-7373	203-555-7327	AIRLINE MILES
876543	MASTERCARD	555 CREDIT LANE NEW YORK, NY 10015	203-555-5723	203-555-4231#5363	MYPOINTS, CASHBACK
765432	SHAW'S MARKET	444 SUPER WAY HARTFORD, CT 10191	605-555-8384	010.036.067.256	10% DISCOUNT

RS1

RS2

RS3

FIG. 7

8/23

800

810

815 PDI PLANET - OPTION SUPPLIER DISPLAY

820 ACCOUNT NUMBER: 987654

NAME: VISA

ADDRESS: 777 PLAZA AVENUE
NEW YORK, NY 10010

TELEPHONE NO.: 203-555-7373

DEVICE ACCESS: 203-555-7327

OPTION STRUCTURES:

☒ AIRLINE MILES

☒ 0% INTRO INTEREST RATE

☒ DELAYED INTEREST RATE

☒ CASH BACK

☒ MYPPOINTS REWARDS

☐ DOLLAR OFF DISCOUNT

☐ PERCENTAGE OFF DISCOUNT

SORTED BY RANK:

1

2

3

4

5

835

OPTION SUPPLIER ASSOCIATE ACCOUNTS:

840 ASSOCIATE NAME: OPTION TYPE:

AMES DEPT STORE MYPPOINTS

BARNES AND NOBLE MYPPOINTS

DELTA AIRLINES AIRLINE MILES

NFL.COM AIRLINE MILES

SPRINT PCS AIRTIME MINUTES

TICKETMASTER CASH DISCOUNT

845

850 RULES AND CONDITIONS:

OFFER NO MORE THAN 3.0 DELTA AIRLINE MILES FOR INDIVIDUAL PURCHASE AMOUNTS GREATER THAN \$5,000.00 AND LESS THAN \$1,000,000.00

OFFER NO MORE THAN 4.0 DELTA AIRLINE MILES FOR AGGREGATE PURCHASE AMOUNTS OVER \$5,000,000.00 - OFFER EXPIRATION 31 DECEMBER 2001

855

860 ACTIVE AND AVAILABLE OPTION STRUCTURES:

865 20% DISCOUNT ON ALL PURCHASES VALID ONLY ON THE DAY OF 21 JUNE 2001

FREE SHIPPING ON ALL INTERNET ORDERS, EXPIRATION 30 JUNE 2001

FIG. 8

9/23

900

OPTION IDENTIFIER	AWARD NAME	AWARD TYPE	AWARD MINIMUM	AWARD MAXIMUM	AWARD START DATE	AWARD END DATE	SUPPLY FUNCTION OPERATION
AIRMILES-DELTA1	DELTA AIRLINE MILES 2.5	DELTA AIRLINE MILES	1.0	2.5	1 JUNE 2000	30 JUNE 2000	IF TRANSAMT <= 500000 ...
AIRMILES-DELTA2	DELTA AIRLINE MILES 3.75	DELTA AIRLINE MILES	1.0	3.75	1 JAN 2001	30 JUNE 2001	IF TRANSAMT > 1000000 ...
CASHBACK-1	CASH BACK AWARD 12	CASH BACK	1.0%	2.0%	1 DEC 2000	31 DEC 2000	TRANSAMT * .01 ...

RA1

RA2

RA3

FIG. 9

10/23

1000

1010

1015 PDI PLANET - OPTION STRUCTURE DISPLAY

OPTION IDENTIFIER: AIRMILES-DELTA1

AWARD NAME: DELTA AIRLINE MILES 2.5

AWARD TYPE: DELTA AIRLINE MILES

1020 PARAMETERS AND ARGUMENTS:

1025 AWARD MINIMUM: 1.0 MILES PER DOLLAR

AWARD MAXIMUM: 2.5 MILES PER DOLLAR

AWARD START DATE: 1 JUNE 2000

AWARD END DATE: 30 JUNE 2000

☒ ACTIVE AWARD

1030 RULES AND CONDITIONS:

1035 OFFER NO MORE THAN 1.5 DELTA FREQUENT FLIER AIRLINE MILES FOR TRANSACTION AMOUNTS LESS THAN OR EQUAL TO \$500,000.00

OFFER NO MORE THAN 2.5 DELTA FREQUENT FLIER AIRLINE MILES FOR TRANSACTION AMOUNTS GREATER THAN \$500,000.00

FIG. 10

FIG. 11 is a schematic diagram of a system 1100 for providing a reward to a user based on a transaction. The system 1100 includes a user device 1102, a server 1104, and a reward provider 1106. The user device 1102 is configured to receive a transaction from a merchant and to transmit a request for a reward to the server 1104. The server 1104 is configured to receive the request and to determine a reward based on the transaction. The reward provider 1106 is configured to provide the reward to the user device 1102.

11/23

1100

TRANSACTION IDENTIFIER	TRANSACTION TYPE	DATE	TIME	AMOUNT \$	AWARD TYPE	CURRENT AWARD	CURRENT OPTION SUPPLIER	OPTION IDENTIFIER
122900-0020222	CONSUMER	29 DEC 2000	11:23 AM	829.00	CASH BACK	1.25%	VISA	CASHBACK-1
122900-0020223	CONSUMER	29 DEC 2000	11:24 AM	299.74	AIR MILES	2.25 MILES FOR EACH \$	AMEX	FFAM732-2
122900-0020224	UNIVERSAL	29 DEC 2000	11:25 AM	98274.65	0% APR	0% FOR 3 MONTHS	DISCOVER	APR726H1

RT1

RT2

RT3

FIG. 11

12/23

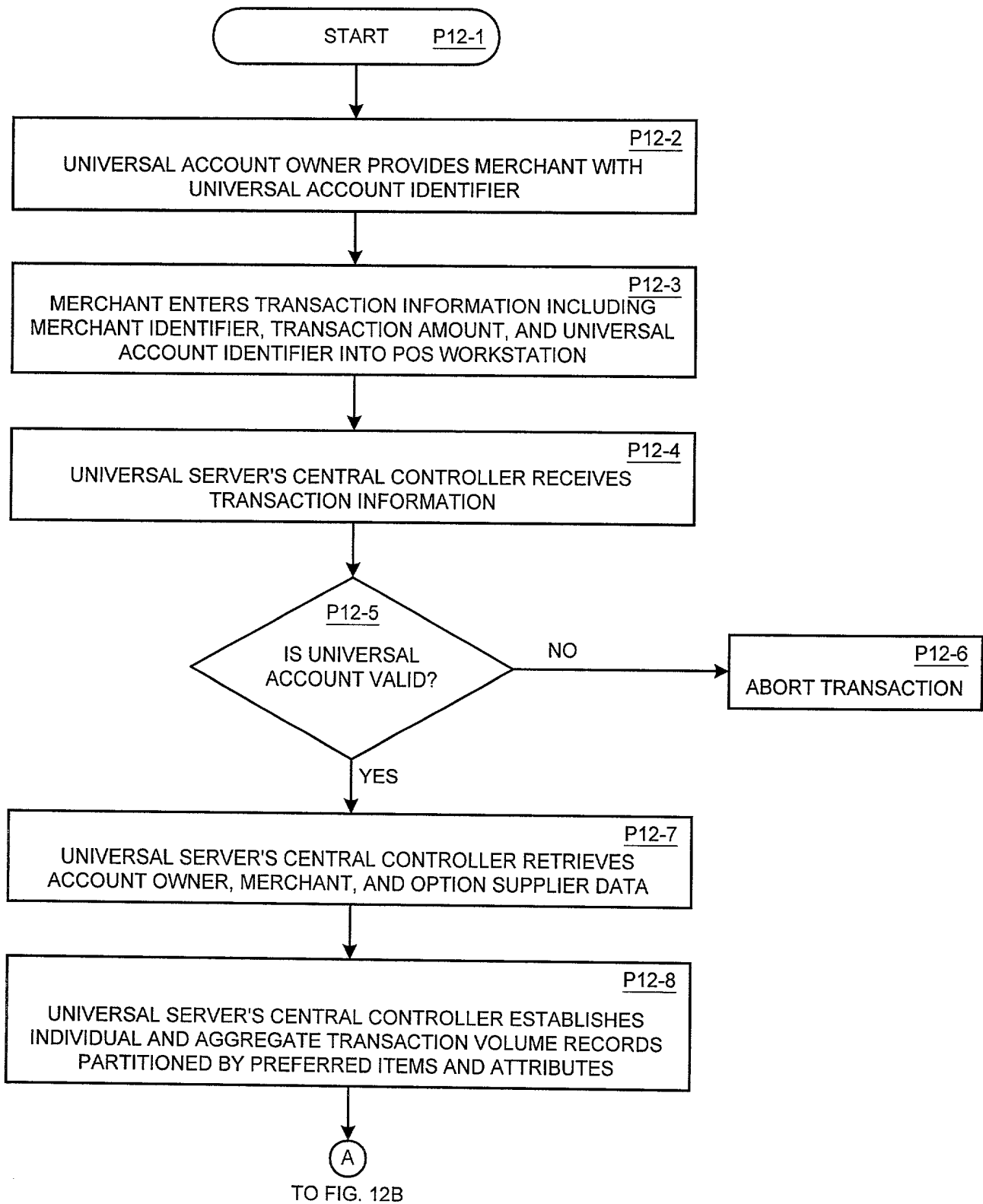


FIG. 12A

FROM FIG. 12A

(A)

P12-9
UNIVERSAL SERVER IDENTIFIES OPTION STRUCTURES SUITABLE
TO ACCOMMODATE ACCOUNT OWNER OPTION PREFERENCES

P12-10
UNIVERSAL SERVER EXPOSES, SOLICITS, NEGOTIATES, RECEIVES,
AND INTEGRATES COMPETITIVE OPTION STRUCTURES AND
ESTABLISHES APPROPRIATE SUPPLY FUNCTIONS

P12-11
UNIVERSAL SERVER ESTABLISHES APPROPRIATE UNIVERSAL
ACCOUNT OWNER ACQUISITION FUNCTIONS

P12-12
UNIVERSAL SERVER CENTRAL CONTROLLER COMPARES OPTIONS
AND PRODUCES OPTION RANKING VALUES USING PREFERENCES
AND STANDARDISED VALUATIONS

P12-13
SELECT HIGHEST RANKED OPTION OFFERS AND DETERMINE
CORRESPONDING PAYMENT OR REDEMPTION MERCHANT
PROCESSING ACCOUNTS ACCEPTABLE BY OPTION SUPPLIERS

(B)

TO FIG. 12C

FIG. 12B

14/23

FROM FIG. 12B

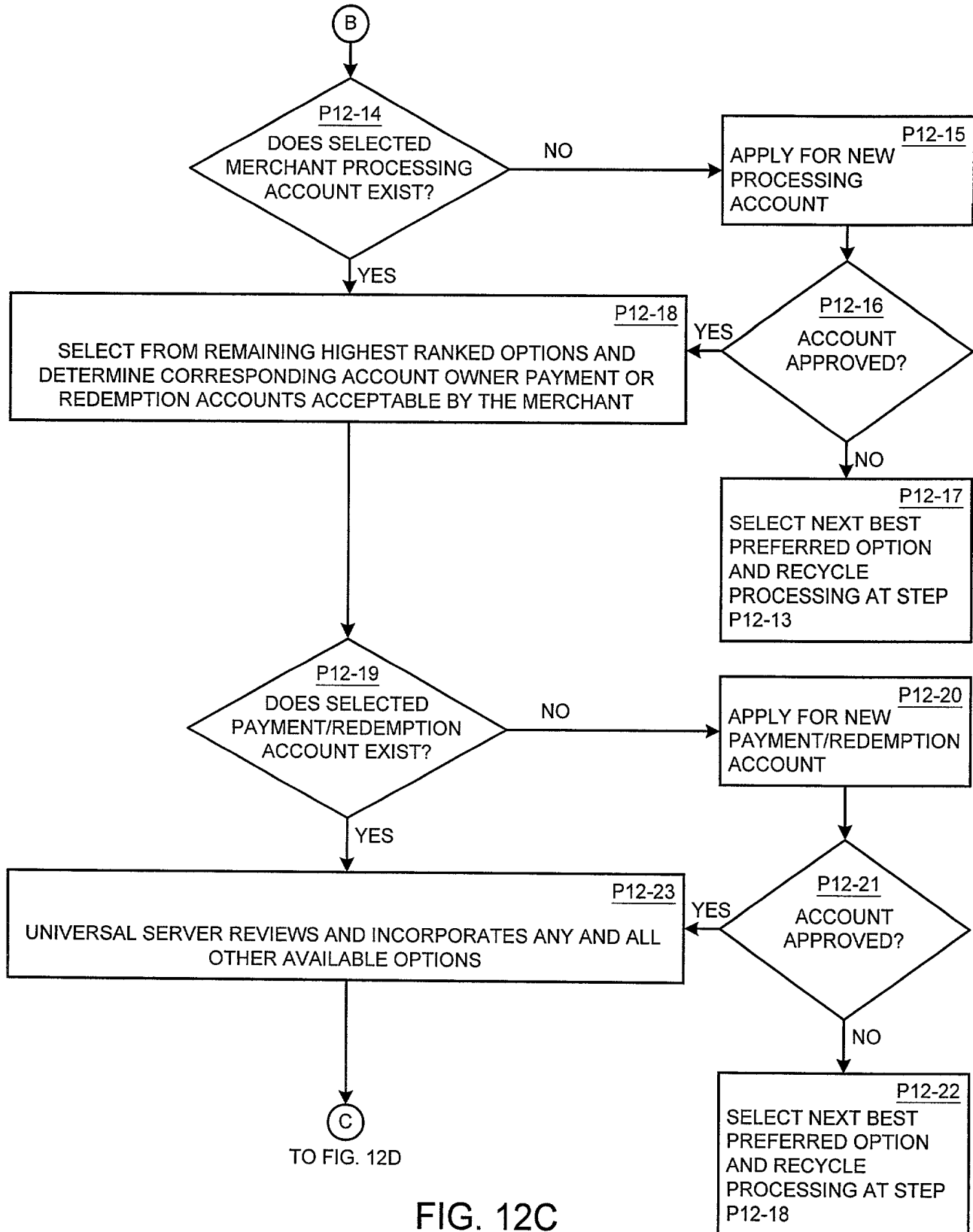


FIG. 12C

FROM FIG. 12C

C

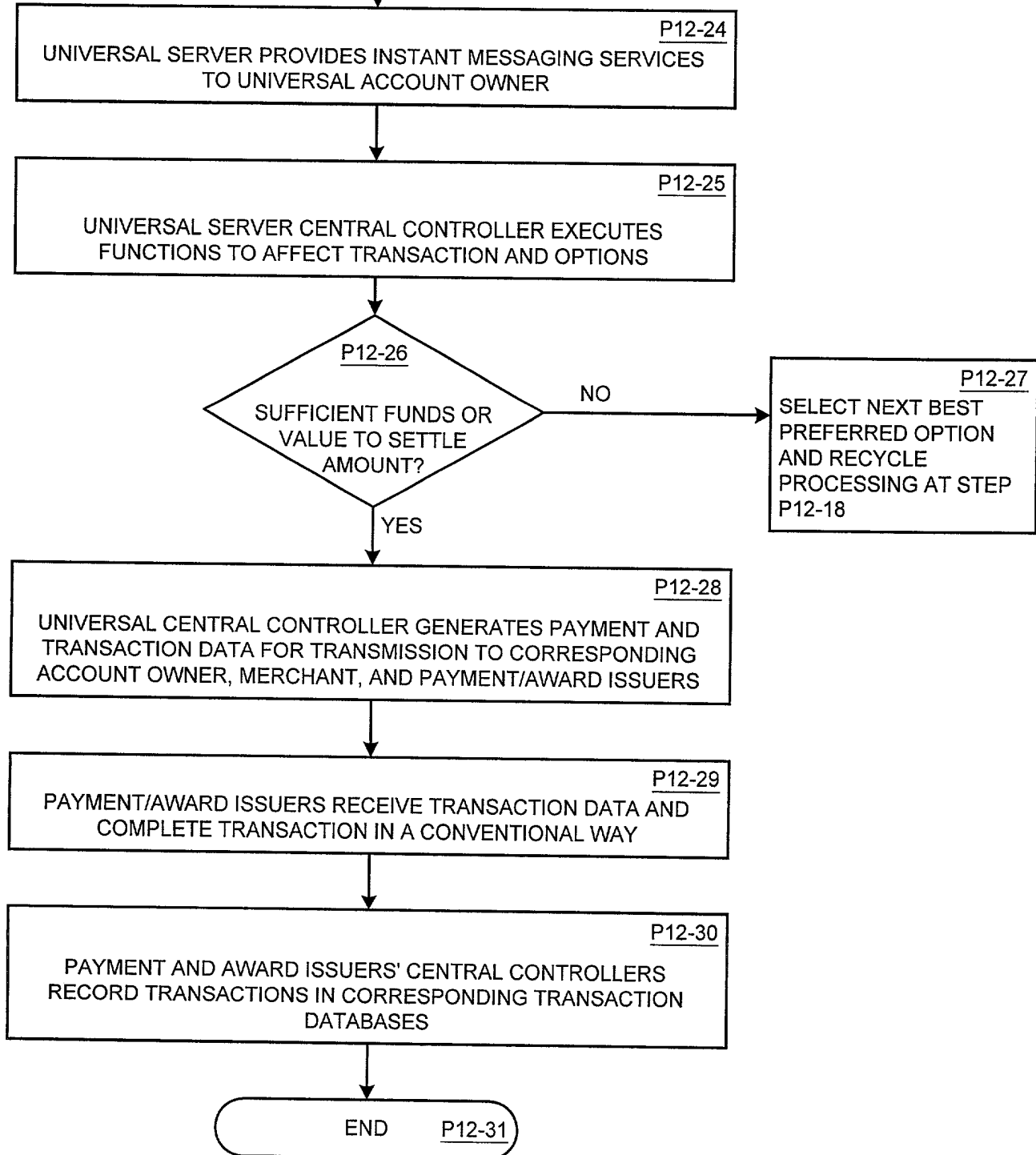


FIG. 12D

16/23

1320

1300

1310

PDI PLANET



ACCOUNT: 1313-3333-4444-5555

PERIOD ENDING: 30 JUNE 2001

MEMBER SINCE: 1999

1315

ACCOUNT OWNER: GREGORY FXI
3 LAKEVIEW AVENUE
CONCORD, MA 01771

1325

OPTION AWARDS AVAILABLE:	OPTION AWARD DESCRIPTION:	OPTION AWARD EXPIRATION:
HOYTS2ADMN	2 ADMISSION PASSES TO HOYT'S MOVIE THEATERS	31 DECEMBER 2005
SPAGO64	20% DISCOUNT AT SPAGO'S RESTAURANT	NO EXPIRATION
JCPEN532	FREE SHIPPING ON ALL JCPENNEY INTERNET ORDERS	30 JUNE 2001

1330

1335

OPTION AWARD ACTIVITY: OPTION AWARD DESCRIPTION:


1340

SEARS ON 14 DEC 2000 \$329.64
YOUR PREFERENCE TO ACQUIRE LOWEST INTEREST RATE PRODUCED A FIXED INTEREST RATE OF 2.35% ON YOUR PURCHASE AT SEARS TRANSACTION #874374 USING YOUR GENEVA BANK MASTERCARD ACCOUNT. OTHER COMPETING OFFERS WERE 2.55% AMEX, 2.80% VISA, AND 750 DELTA FREQUENT FLIER MILES DELTA SKYMILES. YOU REDEEMED 500 MYPOINTS REWARD POINTS DURING THIS TRANSACTION REDUCING THE AMOUNT BY \$25.00 AND YOU QUALIFIED TO RECEIVE 62.5 MYPOINTS REWARD POINTS.

FIG. 13

1410

PDI PLANET



ACCOUNT: 1313-3333-4444-5555

DATE: 24 DECEMBER 2000

TIME: 2:35 P.M. EST

1415

MERCHANT: BARNES AND NOBLE BOOKSELLERS

TRANSACTION: 9832094BA

1420

FIRST PREFERENCE: AIRLINE MILES

AMERICAN EXPRESS 2.8747 PER \$ = 419.619959

DELTA SKYMILES 2.5000 PER \$ = 364.925000

1430

SECOND PREFERENCE: LOWEST INTEREST RATE

MASTERCARD 1.49% APR FOR 6 MONTHS

VISA 1.55% APR FOR 4 MONTHS

1440

REDEEMABLE OPTION ITEMS:

1 - BARNES AND NOBLE 10% DISCOUNT = \$14.60

2 - MYPPOINTS REWARDS 625 POINTS @ \$0.03 = \$18.75

1445

TRANSACTION AS SELECTED:

TOTAL AMOUNT:	\$145.97	ITEMS TO BE ACQUIRED WITH THIS TRANSACTION:
(-) REDEEM #1	\$14.60	(+) AMEX MILES 419.619959
(-) REDEEM #2	\$18.75	(+) MYPPOINTS 563.1
NET DUE AMOUNT:	\$112.62	

1465

PROFILE IN USE:

☒ BUSINESS 1

☐ PERSONAL 1

☐ PERSONAL 2

1425

SELECTIONS:

☒

1435

SELECTIONS:

☐

1450

SELECTIONS:

☒

☒

PLEASE MAKE ANY MODIFICATIONS TO THE ABOVE SELECTIONS AND PRESS THE "PROCESS" BUTTON TO ACQUIRE THE ITEMS, OR PRESS THE "CONTACT" BUTTON IF YOU REQUIRE ADDITIONAL ASSISTANCE.

PROCESS

CONTACT

1455

1460

FIG. 14

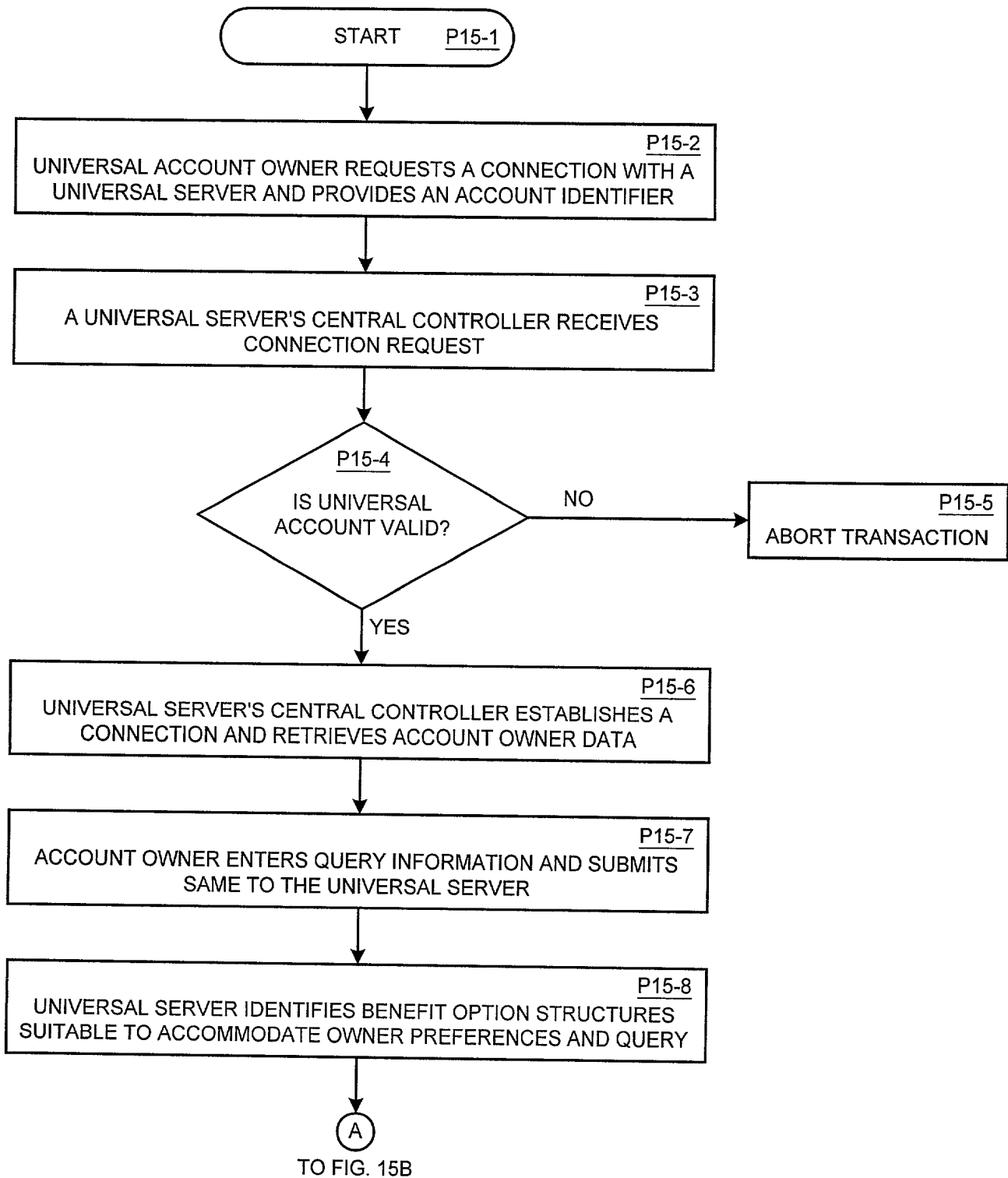


FIG. 15A

FROM FIG. 15A

A

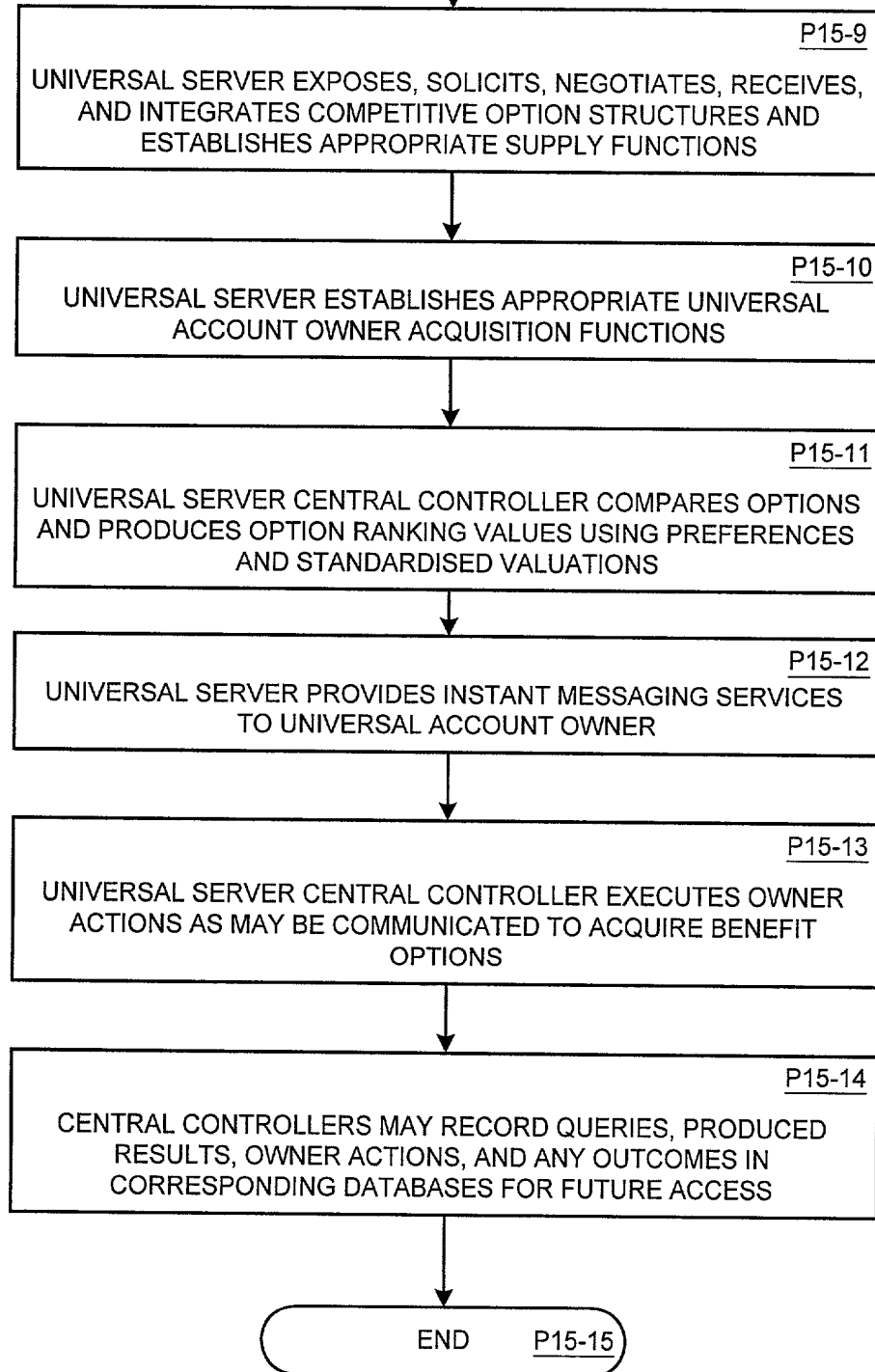


FIG. 15B

20/23

1600

1610

PDI PLANET

ACCOUNT: 1313-3333-4444-5555

DATE: 14 FEBRUARY 2000

TIME: 7:52 A.M. EST

1615

QUERY: BEST BENEFITS FOR MEN'S DRESS SHIRTS

LOCATION: ZIP CODE 01890 = WINCHESTER, MA

1620

FIRST PREFERENCE: AIRLINE MILES

MACY'S - BURLINGTON 2.00 PER \$ PLUS 1.50 EXTRA USING MASTERCARD

1625

FILENE'S - CHERRY HILL 1.75 PER \$ PLUS 1.25 EXTRA USING VISA

SECOND PREFERENCE: GREATEST DISCOUNT

FILENE'S - CHERRY HILL 15% STOREWIDE PLUS EXTRA 10% MEN'S DEPT

1635

MEN'S WEARHOUSE - BOS 10% STOREWIDE

REDEEMABLE OPTION ITEMS:

1 - FILENE'S GIFT CERT / FROM PAUL \$50.00 NO EXPIRATION

2 - MASTERCARD FIRST USE BONUS \$15.00 UNRESTRICTED - EXPIRES 12/31/01

3 - MYPPOINTS REWARDS ACCEPTED AT ALL DISPLAYED STORES

1630

PROFILE IN USE:

☐ BUSINESS 1

☒ PERSONAL 1

☐ PERSONAL 2

PLEASE PRESS THE "CONTACT" BUTTON IF YOU REQUIRE ADDITIONAL ASSISTANCE.

CONTACT

1640

FIG. 16

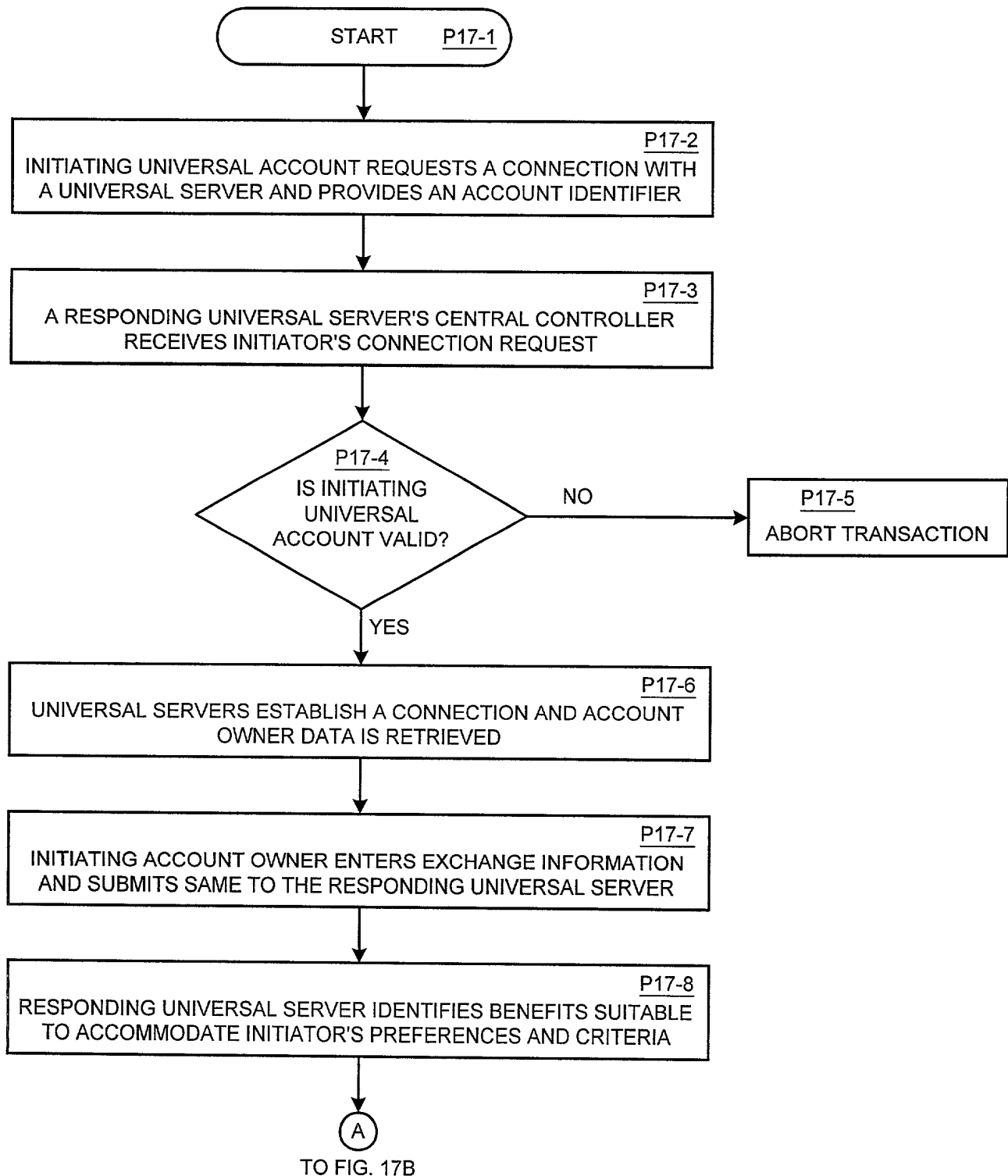


FIG. 17A

FROM FIG. 17A

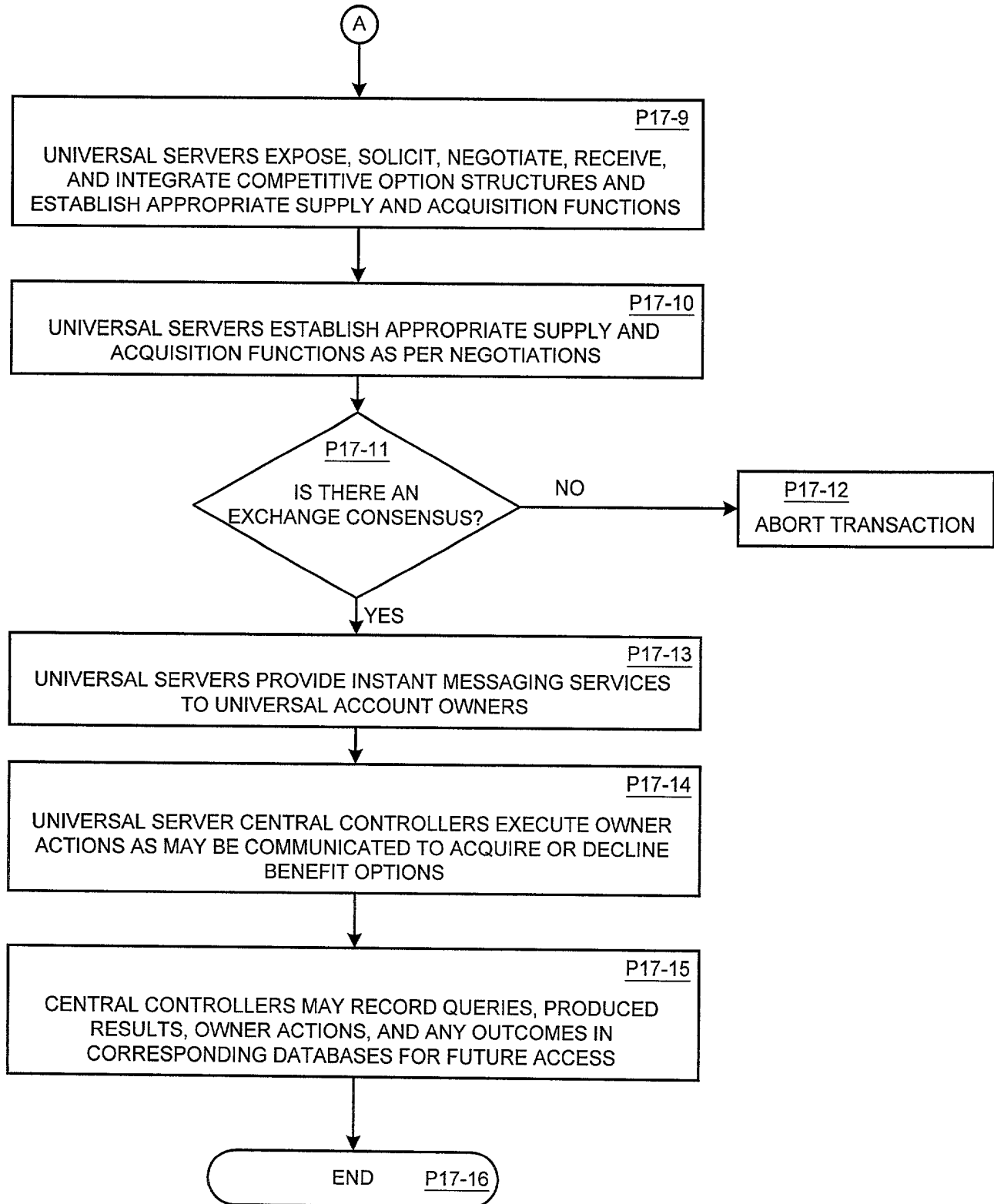



FIG. 17B

1810

PDI PLANET



ACCOUNT: 1313-3333-4444-5555

DATE: 29 NOVEMBER 1999

TIME: 12:02 P.M. EST

1815

EXCHANGE: 5,000 AMERICAN AIR MILES FOR DELTA MILES

CONDITIONS: ACCEPT NOT LESS THAN 1-FOR-1

1820

ALTERNATE: MYPOINT REWARD POINTS

CONDITIONS: ALL OR NONE EXCHANGE

1825

FIRST EXCHANGE PREFERENCE: AIRLINE MILES

		STD. VAL OR RANK
(1) ANONYMOUS - FL	1.2 DELTA MILE FOR EACH 1.0 AMERICAN MILE	28.95
(2) PAUL JAMES - MA	1.0 DELTA MILE FOR EACH 1.0 AMERICAN MILE	24.49

1835

SECOND - ALTERNATE: MYPOINT REWARDS

(1) LINDA JEAN - MA	275 MYPOINTS FOR 5,000 AMERICAN MILES	26.13
(2) KATHYB - MA	210 MYPOINTS FOR 5,000 AMERICAN MILES	19.74

1830

PLEASE SELECT OPTIONS FOR FURTHER DETAILS
OR
PRESS THE "PROCESS" BUTTON TO COMPLETE THE TRANSACTION WHICH WILL
SETTLE THE EXCHANGE WITH THE FIRST LISTING IN YOUR FIRST PREFERENCE.

PROCESS

1840

FIG. 18